REMARKS

Entry of the amendments above and reconsideration of the present application in view of the remarks below and the amendments above are respectfully requested.

Claims 1, 2, 4-9, 11, 13-17, 24 and 25 were pending in the present application. Claims 1, 2, 4-9, 11, 17, and 24 were rejected and Claims 13-16 and 25 were objected to. Applicants have canceled Claims 2, 16, and 24, and added new Claim 26. Claims 1, 4, 5, 8, 11, 14, and 25 have been amended. Presently, Claims 1, 4-9, 11, 13-15, 17, 25 and 26 remain under consideration.

Claim 1 has been amended to replace the definition of R^1 with that of Claim 4 except hydroxy has been deleted as an element of the Markush group for R^1. The replacement definition for R^1 is fully supported in original Claim 4, and in the application as filed at page 5, line 4 to page 6, line 3. Deletion of elements from a Markush group does not add new matter to the present application.

Claim 2 has been canceled because it was redundant in view of the prior amendment of December 13, 2006, incorporating the limitations of Claim 3 into the definitions of R^3 and R^4.

Claim 4 has been amended to delete the definition of R^1 from the claim because the definition has been imported into base Claim 1. This amendment avoids redundancy and does not add new matter to the present application.

Claim 5 has been amended to delete the element hydroxy from the Markush group for R^1, consistent with Claim 4, from which it directly depends, and from base Claim 1. This amendment does not add new matter to the present application.

Claim 8 has been amended to to delete the element hydroxy from the Markush group for R^1. This amendment does not add new matter to the present application.

Claim 11 has been amended to delete the diseases mediated by the Cannabinoid 1 receptor except for substance abuse disorders and eating disorders associated with excessive food intake. This amendment consists of deletion of elements in a Markush group and does not add new matter to the present application. Claim 11 has also been amended to replace the dependency on Claim 1 with direct incorporation of the compounds of Claim 1 as presented in the amendment mailed December 13, 2005, which does not add new matter to the present application.

Claim 14 has been amended to correct a spelling error in the word "associated". This typographical correction does not add new matter to the present application.

Claim 24 has been canceled and new Claim 26 has been added in its place. Claim 26 differs from original Claim 24 in that compound 15, 2,4-dihydroxy-5-(4-chlorophenyl)-6-(2,4-dichlorophenyl)pyrimidine, corresponding to Example 12, has been deleted from the claim. Claim 26 is thus fully supported by original Claim 24 and does not add new matter to the present application.

Claim 25 has been amended to delete the phrase "comprising administering a therapeutically effective amount of a compound according to Claim 1 to the person", because this phrase is redundant in view of the dependency of Claim 25 on Claim 11, and the incorporation of the compounds of structural formula I into Claim 11. This amendment does not add new matter to the present application.

Claim Rejections - 35 U.S.C. § 112

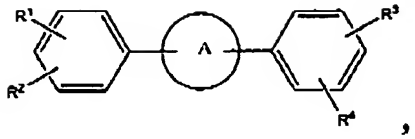
Claims 11 were 16 were rejected under 35 U.S.C. § 112, first paragraph, because the Examiner stated that while the specification was enabled for treating obesity and or eating disorder, it did not reasonably provide enablement for treating all diseases and disorders mediated by Cannabinoid (CB-1), receptor including preventing obesity.

Claim 11 has been amended to delete the diseases mediated by the Cannabinoid 1 receptor except for substance abuse disorders (as claimed in Claim 25) and eating disorders associated with excessive food intake (as claimed in Claims 13 to 15). In view of this amendment, Claim 11 and the claims dependent thereon, including newly added Claims 27-32, meet the requirements of 35 U.S.C. § 112, first paragraph. Claim 16 has been canceled without prejudice to filing a divisional application directed to the canceled subject matter. In view of the amendment to Claim 11 and the cancellation of Claim 16, Applicants respectfully request reconsideration and withdrawal of the rejection of Claims 11 and 16, presently Claim 11, under 35 U.S.C. § 112, first paragraph.

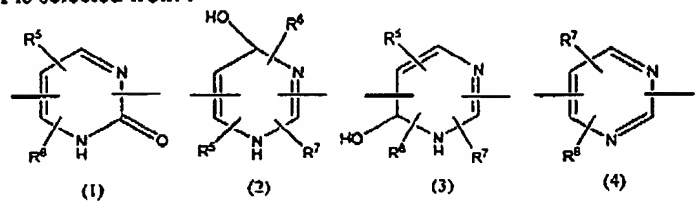
Claim Rejections - 35 U.S.C. § 102

Claims 1-2, 4-8 and 17, presently Claims 1, 4-8, and 17, were rejected under 35 U.S.C. § 102(e) as being anticipated by Agarwal et al., WO 2004/009560. The Examiner stated that Agarwal et al. taught several substituted pyrimidine compounds useful as cyclooxygenase inhibitors for treating pain and other diseases, which including compounds generically claimed in the instant claims, see page 9, formula 1, and note the definition of A, R^1 R^2, R^3, R^4, R^5 and R^6. The Examiner further stated that when R^5 and R^6 were either aryl or heteroaryl, compounds taught by Agarwal et al. includee instant compounds. The Examiner pointed to the entire document, especially pages 13-17 for various substituted pyrimidinc compounds, particularly page 16, species on line 9-11, 13, 14 and 18 and examples 7 through 215, pages 33-37, wherein the starting material uracils were also said to be claimed in the instant claims. The Examiner pointed out that the Agarwal compounds wherein R1 and R2 were oxo read on the compounds of the present invention when both R^1 and R^2 were OR^3 and R^3 was H, thus providing hydroxyl group at 2 and 4-position which would tautomerize to the oxo group.

As noted previously, WO 2004/009560 Agarwal teaches compounds of the following structure:



in which A is selected from :



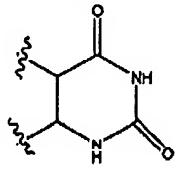
(1) (2) (3) (4)

The compounds of the present invention are pyrimidines and are fully unsaturated having 3 double bonds unlike the Agarwal compounds in which A is (2) or (3). The presently claimed invention does not allow a hydrogen or phenyl R^1 substituent between the pyrimidine nitrogens (R^1 group), and the Agarwal compounds in which A is (4) do not fall within the scope of the presently amended claims. Applicants submit that the Agarwal compounds in which A is (2), (3), or (4) are not within the scope of the presently claims and do not anticipate the presently amended claims.

Each Agarwal species disclosed on pages 13-17 of WO 2004/009560 provides a chloro, azide, hydrazine, trifluoromethyl, methylthio, or hydroxy substituent at the 4 position of the Agarwal A ring, and some of the species provide hydrogen substitution between the Argawal A ring nitrogens. However in the compounds of the present invention, R^2 and R^4 cannot be chloro, azide, hydrazine, trifluoromethyl, methylthio, or hydroxyl, and, as amended, $R^1$is not hydrogen. Therefore, the Agarwal compounds disclosed on pages 13-17 are outside of the scope of the presently amended claims.

Agarwal Examples 7-15 on pages 33-37 of WO 2004/009560 disclose compounds in which the 4 position (corresponding to the R^2 or R^4 substituent in the present invention) is substituted with chloro and azide and the 2 position between the A ring nitrogens (corresponding to our R^1 substituent) is substituted with chloro or trifluoromethyl. However, in the compounds of the present invention, R^2 and R^4 cannot be chloro or azide, and R^1 cannot be chloro or trifluoromethyl.

Thus, the Examiner's rejection is directed to the Agarwal compounds in which A is (1), having an oxo substituent between the pyrimidine nitrogen, and the uracil starting materials of Examples 7-15 which have the following core structure, which the Examiner noted can tautomerize to the corresponding hydroxyl substituted pyrimidine.

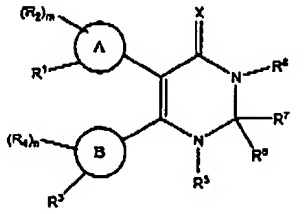


Applicants have amended base Claim 1, from which Claims 4-8, and 17 depend, directly or indirectly. Claim 1 and dependent Claims 4 and 8 have been amended to exclude R^1 as hydroxy. As amended, Claim 1, and the claims dependent thereon, no longer reads on compounds wherein R^1 is hydroxy, including the tautomers of the uracil starting materials for the Argarwal compounds. Still further, the generically claimed compounds in Agarwal, e.g. formula 1 on page 9, do not anticipate the structurally different genus of the present application.

As amended, Claims 1, 4-8, and 17 are novel over the Argarwal reference. In view of the amendments and remarks above, Applicants respectfully request reconsideration and withdrawal of the rejection of Claims 1-2, 4-8 and 17, presently Claims 1, 4-8, and 17, under 35 U.S.C. § 102(e) as being anticipated by Agarwal et al., WO 2004/009560.

Claims 1, 2, 4-8 and 17, presently Claims 1, 4-8 and 17, were rejected under 35 U.S.C. § 102(e) as anticipated by Agarwal et al., WO 03/084935. The Examiner stated that Agarwal et al. taught several diaryl pyrimidine compounds useful as cyclooxgenase inhibitors for treating pain and other diseases, including instant compounds generically claimed in the instant claims, pointing to page 9, formula I and the definition of A, B, R1, R2, R3, R4, R5, R6, R7 and R8. The Examiner stated that given A and B choices, when R5 and R6 formed a double bond, compounds taught by Agarwal et al. included instant compounds. The Examiner noted the entire document, especially pages 14-15 for various substituted pyrimidine compounds including several compounds claimed in the instant claims. See page 38-47, examples 5-20 for compounds made. The Examiner further stated that the instant claims read on the compounds of the reference when both R^1 and R^2 were OR^a and R^a was H, thus providing hydroxyl group at 2 and 4-position, which would tautomerize to the oxo group. The Examiner stated that the instant claims include oxo groups as part of the definition of R^1 and R^2, particularly noting examples 13 and 20 of the Agarwal reference.

Argarwal et al. WO 03/084935 ("Agarwal 2") discloses compounds of the following structure:



Applicants have amended base Claim 1, from which Claims 4-8, and 17 depend, directly or indirectly. Claim 1 and dependent Claims 4 and 8 have been amended to exclude R^1 as hydroxy. As amended, Claim 1, and the claims dependent thereon, no longer reads on compounds wherein R^1 is hydroxy, including the tautomers of the uracil starting materials for the Argarwal compounds. Still further, the generically claimed compounds in Agarwal, e.g. formula I on page 9, do not anticipate the

structurally different genus of the present application. Thus, Claims 1, 4-8, and 17 are novel over the Argarwal 2 reference. In view of the amendments and remarks above, Applicants respectfully request reconsideration and withdrawal of the rejection of Claims 1-2, 4-8 and 17, presently Claims 1, 4-8, and 17, under 35 U.S.C. § 102(e) as being anticipated by Agarwal et al., WO 03/084935.

Claim Rejections - 35 U.S.C. § 103

Claims 1-2, 4-9, 17 and 24, presently Claims 1, 4-9, 17 and 26, were rejected under 35 U.S.C. §103(a) as being unpatentable over Agarwal et al., WO 2004/009560. The Examiner stated that Agarwal et al. differed from the instant claims in exemplifying only some of the compounds embraced in the genus of compound of formula I shown in page 9; however, Agarwal et al. taught equivalency of those compounds taught in pages 16, and 33-37 with those generically recited in pages 9-10. The Examiner concluded that it would have been obvious to one having ordinary skill in the art at the time of the invention was made to make compounds using the teachings of Agarwal et al. and expect the resulting compounds to possess the uses taught by the art in view of the equivalency teaching outline above.

Applicants respectfully traverse the rejection of Claims 1-2, 4-9, 17 and 24, presently Claims 1, 4-9, 17 and 26, under 35 U.S.C. §103(a) over Agarwal et al., WO 2004/009560. As noted above, the amended claims of the present invention are novel over the cited reference. In addition to the amendments to base Claim 1, and Claims 4, 5, and 8 to delete hydroxy from the Markush group for R1, Claim 24 was canceled and replaced with new Claim 26, which deletes compound 15 of original Claim 24. As amended, the compounds of the present invention do not encompass either oxo or hydroxy at the 2-position of the pyrimidine ring. Still further, there is no suggestion in Agarwal to pick and choose substituents to arrive at the presently claimed compounds in Claim 26. In view of the amendments and remarks above, Applicants respectfully request reconsideration and withdrawal of the rejection of Claims 1-2, 4-9, 17 and 24, presently Claims 1, 4-9, 17 and 26, under 35 U.S.C. §103(a) over Agarwal et al., WO 2004/009560.

Claims 1-2, 4-9, 17 and 24 are rejected under 35 USC 103(a) as being unpatentable over Agarwal et al., WO 03/084935 for reasons of record. The Examiner incorporated the teachings of Agarwal et al. as discussed in the above 102 rejection, and stated that Agarwal et al. taught several substituted pyrimidine compounds useful as cyclooxygenase inhibitors for treating pain and other diseases, which include instant compound generically claimed in the instant claims, but differed from the instant claims in exemplifying only some of the compounds embraced in the genus of compound of formula I shown in page 9. The Examiner further stated that Agarwal et al. taught equivalency of those compounds taught in pages 38-47, examples 5-20, with those generically recited in pages 9-10, and that thus, it would have been obvious to one having ordinary skill in the art at the time of the

invention was made to make compounds using the teachings of Agarwal et al. and expect resulting compounds to possess the uses taught by the art in view of the equivalency teaching outline above.

Applicants respectfully traverse the rejection of Claims 1-2, 4-9, 17 and 24, presently Claims 1, 4-9, 17 and 26, under 35 U.S.C. §103(a) over Agarwal et al., WO 03/084935. As noted above, the amended claims of the present invention are novel over the cited reference. In addition to the amendments to base Claim 1, and Claims 4, 5, and 8 to delete hydroxy from the Markush group for R1, Claim 24 was canceled and replaced with new Claim 26, which deletes compound 15 of original Claim 24. As amended, the compounds of the present invention do not encompass either oxo or hydroxy at the 2-position of the pyrimidine ring. Still further, there is no suggestion in Agarwal to pick and choose substituents to arrive at the presently claimed compounds in Claim 26. In view of the amendments and remarks above, Applicants respectfully request reconsideration and withdrawal of the rejection of Claims 1-2, 4-9, 17 and 24, presently Claims 1, 4-9, 17 and 26, under 35 U.S.C. §103(a) over Agarwal et al., WO 03/084935.

Allowable Subject Matter

The Examiner noted that Claims 13-16 and 25 were objected to as being dependent upon a rejected base claim, but noted that these claims would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicants have amended Claim 11, from which Claims 13-16 and 25, as well as new Claims 27 to 32, directly or indirectly depend. The amendments to Claim 11 incorporate the limitations of Claims 13 and 25, deemed allowable by the Examiner, by deleting the other indications from the Claim. As amended, Applicants respectfully submit that base Claim 11 is allowable, and hence dependent Claims 13-15 and 25 are also allowable.

In view of this amendment and the remarks above, Applicants respectfully request that the objection to Claims 13-16 and 25, presently Claims 13-15, and 25, be withdrawn.

Applicants respectfully request reconsideration and withdrawal of the rejection and earnestly solicit a favorable response from the Examiner. The Examiner earnestly is invited to contact

Applicants' representative at the number below, if such contact would facilitate prosecution of this application to allowance.

Respectfully submitted,

By _____
Catherine D. Fitch, Reg. No. 36,502
Attorney for Applicants

MERCK & CO., Inc.
P.O. Box 2000
Rahway, New Jersey 07065-0907
Tel: (732)594-4283

September 22, 2006